

## NEW DESCRIPTION

## A NEW TRIBE AND A NEW GENUS OF OSCINELLINAE (DIPTERA: CHLOROPIDAE) FROM INDIA

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A new tribe, Indonellini with type genus *Indonella* Cherian gen. nov. of Subfamily Oscinellinae (Chloropidae) is described. Salient features and affinities of *Indonella* are given and the type species *I. intermedia* sp. nov. from Kerala is also described.

**Key words:** Diptera, Chloropidae, Oscinellinae, new tribe, genus and species, India

## INTRODUCTION

Chloropidae is a medium-sized family of Diptera comprising of small flies represented in all the faunal regions of the world. Nartshuk (1983, 1987) gave Family Chloropidae the status of a superfamily, Chloropoidea and divided it into families Siphonellopsidae and Chloropidae, the former comprising genera dealt with earlier under the Subfamily Siphonellopsinae of the undivided Family Chloropidae, and the latter the rest of *Chloropid* genera. However, Cherian (2002) based on his studies on the close affinities shown by many species and genera belonging to the two families relegated Siphonellopsidae to the rank of a subfamily of Chloropidae as traditionally followed.

During the course of revision of Chloropidae of India and adjacent countries, the authors came across a new species, belonging to Subfamily Oscinellinae, which shows close affinities to some genera of Siphonellopsinae. Because of some intermediate and also combination of characters the species possesses, it does not fit elsewhere in any of the genera of 22 recognized tribes of Chloropidae. Hence, this new species, *Indonella intermedia* from Kerala, is placed in a new tribe, Indonellini with type genus *Indonella* gen. nov. under Subfamily Oscinellinae. The new tribe, genus and species are described here.

Type specimens are retained in the collections of the University of Kerala and shall later be deposited in the National Collections of Zoological Survey of India, Kolkata.

**Abbreviations used:**

*ant3* - third antennal segment; *as* - apical scutellar bristle; *1 dc* - first dorsocentral bristle; *2 dc* - second dorsocentral bristle; *fr* - frontal hair; *h* - humeral bristle; *if* - interfrontal bristle; *ivt* - inner vertical bristle; *kepst* - katepisternum; *m-m* - medial cross-vein; *npl* - notopleural bristle; *oc* - ocellar bristle; *orb* - fronto-orbital bristle; *ovt* - outer vertical bristle; *pa* - postalar bristle;

*prs* - prescutellar bristle; *pvt* - postvertical bristle; *r* - radial vein; *r-m* - radio-medial vein; *sa* - supraalar bristle; *ss* - subapical scutellar bristle.

**Indonellini** Cherian, tribe. nov.

**Type genus:** *Indonella* Cherian gen. nov.

A small tribe having long and reclinate *orb* and *oc*, long *ivt*, broad gena, *2 h*, and *2 dc* bristles, subsquarish scutellum with *as* widely separated at base, long *r* 2+3 and vestigial but somewhat distinct anal vein.

Head higher than long; frons greatly widened at vertex, projecting beyond the anterior margin of eye; frontal triangle large and tomentose, with depressions; face deeply concave with low facial carina; arista long and finely pubescent; gena wider than *ant3* with lower shiny part bearing many punctate hairs and long oral setae; eyes pubescent with horizontal long axis; cephalic bristles very well-developed; *ivt* longer than *ovt* and subequal to *pvt*; *oc* reclinate; *orb* and *if* 4 each, the former reclinate; scutum finely tomentose with evenly distributed dense hairs; pleura with *kepst* hairy; scutellum subsquarish, much wider than long; *as* arising from posterolateral corners of scutellum and borne on warts; base of *ss* 1 nearer to base of scutellum than to *as*; *h* 2, inner shorter and slightly turned mesad; *npl* 1+1, equal to outer *h*, *pa* 1 and *1 dc*; *dc* 2 short, slender and presutural wing broad with well-developed anal area, oblique *m-m*, and vestigial, but slightly distinct anal vein; legs without tibial and femoral organs.

**Distribution:** Oriental Region

**Remarks:** Indonellini shows affinities to both the subfamilies Siphonellopsinae and Oscinellinae and is intermediate between the two. In the general development of frons, gena and antennae, appearance of head and in having *ivt* longer than *ovt*, *2 h* and *2 dc* bristles and such other characters, Indonellini superficially resembles some of the genera of Siphonellopsinae like *Apotropina* Hendel, *Protohippalates* Andersson and others. However, in

possessing reclinate *oc* and *orb*, in the absence of additional bristles like *sa*, *prs* and a bristle on *kepst* and in the nature of general chaetotaxy, thoracic pubescence and build of wing and wing venation, this tribe differs from Siphonellopsinae and exhibits close affinities to other tribes and genera of Oscinellinae. But a combination of characters like anteriorly projecting frons, long cephalic bristles with *ivt* longer than *ovt*, presence of 2 *h* and 2 *dc* bristles, nearly subtruncate scutellum with widely separated *as* borne on warts and a vestigial anal vein are not found together in any other Chloropid tribe or genus so far known, though a few of these characters are very rarely found in different combinations in some of the other tribes and genera of Oscinellinae. Hence, a new tribe Indonellini with type genus *Indonella* gen. nov. is proposed under which the new species is placed.

Genus *Indonella* Cherian gen. nov.

**Type species:** *Indonella intermedia* sp. nov.

Medium sized black flies with anteriorly projecting frons, large, subshiny and dark tomentose frontal triangle, broad gena, long *ivt*, flattened scutum, nearly subsquarish scutellum with *as* borne on short warts, 1+1 *npl* and 2 *h* and 2 *dc* bristles.

**Head:** Higher than long. Frons projecting beyond anterior margin of eye, widened at vertex and gradually narrowing anteriorly as in most genera of Siphonellopsinae, with well-developed black *fr*; frontal triangle large, with convex side margins, subshiny, finely dark tomentose, partly with complex depressions as in some species of *Euthyridium* Frey; *if* long, reclinate, in a row along margin of frontal triangle. Face much narrower than frons, deeply concave; facial carina triangular between antennae and running as a low, narrow ridge to depressed epistomal margin. Basal antennal segments partly covered by projecting frons; *ant3* wider than long; arista slender with fine pubescence. Gena narrowing anteriorly, wider than *ant3*, divided into narrow upper tomentose part and much broad glabrous lower part, the latter with punctate hairs and a row of well-developed oral setae; vibrissal corner blunt, not reaching anterior margin of eye; postgena wide. Eye of medium size, oval with nearly horizontal long axis. Parafacialia not developed. Palpi cylindrical and proboscis of medium size, both with well-developed black hairs. Head bristles long, stout, black; *ovt* a trifle shorter than *ivt*, the latter subequal to *pvt* which are parallel and turned caudad; *oc* very well-developed, erect, subparallel, reclinate; *orb* 4, reclinate.

**Thorax:** Scutum wider than long with almost flattened, very finely dark tomentose, nearly shiny disc-bearing uniformly distributed punctate hairs. Scutellum much broader

than long, nearly subsquarish, pubescent like but more coarsely punctate than scutum. Pleura glabrous with short hairs on *kepst*. Thoracic bristles very well-developed; *h* 2, of which outer is long and subequal to *npl* and inner nearly half as long as outer; *npl* 1+1, subequal; *pa* 1 and 1 *dc* equal to *npl* and *pa* 2 shorter than *pa* 1; apart from normally developed 1 *dc* there is a short and slender presutural 2 *dc* which is only a little longer than scutal hairs; *as* widely separated at base, longer than scutellum, borne on short wart; *ss* 1 located nearer to the base of scutellum than to base of *as*.

**Wing:** Hyaline with deeply brown veins; costal break developed; second sector of costa more than 2x as long as third sector; terminal sector of m 1+2 joining costa very slightly beyond apex of wing; m-m cross-vein oblique; terminal sector of m 3+4 distinctly convex below in basal half. Anal area very well-developed. Haltere yellow.

**Legs:** Partly yellow and partly dark brown with well-developed black hairs; midtibia with 2-3 short, black subterminal spines apart from normally developed spine; tibial and femoral organs not developed.

**Abdomen:** Suboval, finely dark tomentose with numerous well-developed hairs, especially at sides, and longer, bristly hairs on distal segments. Female ovipositor slender, of medium size.

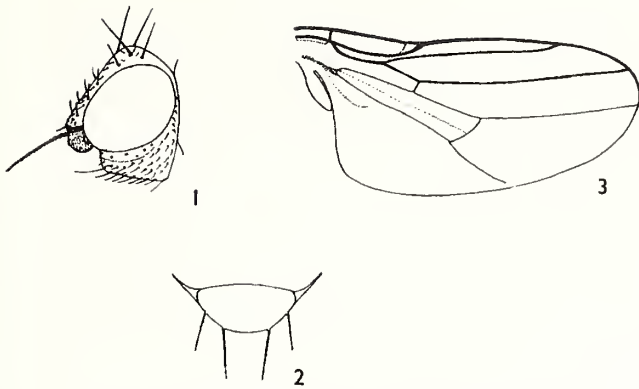
**Distribution:** Oriental Region.

**Etymology:** The genus has been named after India, the country of its distribution with the suffix *nella*.

**Remarks:** Because of the combination of characters discussed earlier which *Indonella* possesses it is considered a distinct genus intermediate between Siphonellopsinae and Oscinellinae. Though it shows closer affinities to Oscinellinae yet it cannot be placed under any other tribe or genus of the subfamily so far known. Hence, it is placed under the new tribe Indonellini of which it is the type genus.

*Indonella intermedia* Cherian sp. nov. (Figs 1-3)

**Male and Female:** Head (Fig. 1): Higher than long, length, height and width ratio 16:19:24 (eyes are collapsed in both the types, and hence width of head cannot be measured with exactitude). Frons greatly widened at vertex as in most species of Siphonellopsinae, width at vertex margin more than twice that behind apex, projecting distinctly beyond anterior margin of eye, subshiny black along three-fourths its length, yellowish-brown in rugulose anterior part, longitudinally depressed at sides of frontal triangle and with well-developed black *fr*; frontal triangle large, subshiny black except for brownish area around apex, finely dark tomentose, reaching anterior margin of frons, ending with slightly obtuse apex and with a large, oblong, median shallow depression in



Figs 1-3: *Indonella intermedia* Cherian sp. nov.  
1. Head; 2. Scutellum; 3. Wing

anterior part and with more depressions, which are discernable only in certain angles of illumination, and appear somewhat like suborbicular to rectangular pits on either side of ocellar triangle, recalling partly the condition in some species of *Eutlyridium* Frey. Face deeply concave, much narrower than frons; facial carina triangular between antennae and running as low ridge to epistomal margin which is depressed, deeply concave in middle and silvery white tomentose. Basal antennal segments deeply infuscated, partly hidden by projecting frons; *ant*3, 1.4x as wide as long, yellowish brown with dark tinge along dorso-distal margin; arista long, located sub-basally, slender, dark brown with fine, but distinct, fairly dense pubescence. Gena well-developed, narrowing anteriorly, width in the middle 1.25x that of *ant*3, divided into upper narrow grey tomentose part and lower much broader, shiny, brownish black part bearing fairly dense, well-developed, punctate black hairs; oral margin with a row of 8-10 black, prominent and erect setae; vibrissal corner blunt, not reaching anterior margin of eye, with one vibrissal bristle; postgena well-developed, brownish-black with well-developed hairs; parafacialia not developed. Eye suboval, appearing to be densely short pubescent (but not very distinct because of collapsed eyes in both the types), with horizontal long axis. Palpi cylindrical and proboscis of medium size, both with well-developed black hairs. Head bristles very well-developed, black; *ivt* a little longer than *ovt*; *pvt* subequal to *ivt*, parallel, turned caudad; *oc* long, erect, subparallel, reclinate; *orb* 4, anterior 3 reclinate, posteriormost reclinate and slightly latero-clinate; *if* 4, reclinate, in a row along margin of frontal triangle.

**Thorax:** Wholly black. Scutum 1.1x as wide as long, with nearly flattened, finely dark tomentose shiny disc bearing fairly dense, finely punctate evenly distributed black hairs; humeral callus moderately developed. Scutellum (Fig. 2) subsquarish, 1.7x as wide as long with almost flattened disc which is pubescent like but more coarsely

punctate than scutum. Pleura glabrous with slender fairly dense black hairs on *kepst*. Thoracic bristles very well-developed; *h* 2, outer long and equal to *npl*, inner slender, nearly half as long as outer, slightly turned mesad; *npl* 1+1, long, subequal and equal to *pa* 1 and 1 *dc*; *dc* 2 presutural, short and slender, only 2x as long as scutal hairs; *pa* 2 about three-fifths as long as *pa* 1; *as* widely separated at base, 1.2x as long as scutellum, arising from posterolateral corner of scutellum, borne on short wart; *ss* 1, 0.7x as long as *as*, arising laterally from nearer to base of scutellum than to base of *as*.

**Wing:** (Fig. 3): 2.43x as long as wide, hyaline with yellowish brown veins and brown hairs; proportions of costal sectors 2 to 4 in the ratio 19:9:6; terminal sectors of *r* 4+5 and *m* 1+2 parallel; *r-m* cross vein distad of middle of discal cell, opposite 0.52 of its length; *m-m* cross vein oblique; terminal sector of *m* 3+4 convex below in basal half; a vestigial anal vein is present; anal area well-developed. Haltere oval, yellow, pointed at apex.

**Legs:** Medium size, with well-developed dark hairs; coxae yellow; fore femur along more than three-fourths its length basally, and mid and hind femora along nearly one third their lengths, basally yellow and remaining areas gradually becoming infuscated and blackish especially on mid and hind femora; fore tibia and all tarsi almost wholly yellow; mid and hind tibiae brownish-black except for their yellow bases and apices; mid-tibia with two to three short, additional subterminal spines apart from the normal spine; tibial and femoral organs absent.

**Abdomen:** Suboval, subshiny, finely dark tomentose, brownish black except for a large yellowish-brown rugulose, subsquarish area covering median part of dorsum of two basal segments and with numerous well-developed dark hairs especially along sides, and longer bristly hairs on distal segments. Female ovipositor slender of medium size with dark hairs. Male genitalia could not be studied because of partly damaged terminal part of abdomen in the male specimen.

**Length:** Male: 1.77 mm; wing 1.88 mm. Female: 1.81 mm; wing 1.85 mm.

**Holotype:** Male, INDIA: Kerala: Trivandrum dt., Sreekaryam, 25 m, 2.viii.2006, collected from tuber of *Amorphophallus*, Coll. P. Rajamma.

**Paratype:** 1 female (some body parts including wings partly crumbled), collection data same as of holotype.

**Etymology:** The species links the two subfamilies Siphonellopsinae and Oscinellinae, and hence the name *intermedia*.

**Remarks:** The flies were found resting on freshly dug out tuber of *Amorphophallus* and were collected along with those of *Apotropina* Hendel.

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### ACKNOWLEDGEMENTS

The authors are grateful to the Ministry of Environment and Forests, Government of India for financial support under its AICOPTAX project and to Prof. Oommen V. Oommen,

Head of the Department of Zoology, University of Kerala for facilities for work and encouragement. We are also thankful to Dr. P. Rajamma, Senior Scientist, Central Tuber Crops Research Institute, Trivandrum for collecting and providing the specimens for study.

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